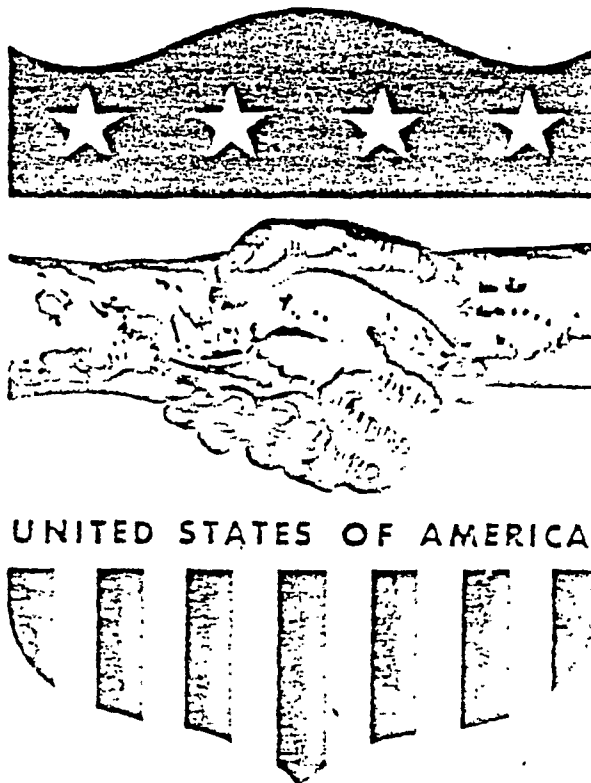


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ACTION PLAN
FOR
FISCAL YEARS 1985 AND 1986



AGENCY FOR INTERNATIONAL DEVELOPMENT
U.S. EMBASSY
MEXICO CITY, MEXICO

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AID - MEXICO

ACTION PLAN FOR FISCAL YEARS 1985 AND 1986

TABLE OF CONTENTS

Part I	Preface and Summary
Part II	Social and Economic Conditions
Part III	AID Strategy
Part IV	Program Areas:
	a) Population
	b) Health and Nutrition
	c) Private Sector Development
	d) Agriculture and Food Production
	e) Conservation and Environment

A.I.D. - MEXICO

Action Plan for Fiscal Years 1985 and 1986

Part I - Preface

The purpose of this paper is to (a) define AID-Mexico's program objectives for the the next two years and (b) to identify U.S. economic resources from A.I.D. and other sources which can be put to effective use in fulfilling these objectives.

It must be understood at the outset that the basic difference between advanced developing countries (ADCs), such as Mexico, and developing countries is that the ADCs enjoy a comparatively well developed institutional and human resource base in a range of technical areas, a public commitment to development and the capability for financing development programs. These qualifications make the ADCs appropriate sites for research and training that benefit other developing countries. The ADCs, which are suffering the effects of the world-wide recession are, nevertheless, scarce in certain resources which they need for economic recovery and development. Moreover, large segments of their population are not yet fully integrated into the modern economy. Accordingly, U.S. support is needed for their technical research and development efforts. Such support consists primarily of facilitating these countries' access to needed U.S. technology, which is either scarce or too costly for them to procure without our help.

Projects proposed in this paper are, first and foremost, Mexican projects to which we propose to contribute U.S. resources, both public and private, in limited but strategic ways.

Summary

A healthy, stable and growing economy south of the border will lead to greater political and economic cooperation between the U.S. and Mexico. Moreover, only as the economic disparities between our two countries decrease and opportunities for employment in Mexico expand faster than Mexico's working-age population, will the number of Mexicans seeking work illegally in the U.S. decline. Mexico's economic crisis has sharply reduced the financial resources Mexico needs to regain productivity lost over the last four years as well as to meet its economic development objectives. A growing Mexican economy opens new U.S. investment opportunities and a larger market for U.S. goods and services. Stronger, more diverse research and training centers offer U.S. scientists and technicians high quality staff and testing sites for technical research and development "close to home". The argument for helping Mexico to foster an improved economic climate is compelling.

The goal of the AID, as with other U.S. government programs in Mexico, is to familiarize Mexico's current and future leaders with our institutions, technologies and products by establishing partnerships and interchanges in support of mutual interests.

Our objective is to facilitate Mexico's access to sources of U.S. technologies needed for development activities that benefit institutions and private industry in Mexico and in other developing countries. Often these partnerships will build upon relations established during the period of U.S. bilateral assistance to Mexico as well as build new relationships.

AID/Mexico will:

- promote scientific and technological exchanges and joint research;
- arrange for technical and management training in support of Mexican development objectives;
- promote long-term institutional relationships between universities, research institutes, private voluntary organizations and professional, business and labor organizations;
- update and expand information networking of technical, economic and trade data;
- coordinate food aid under Agriculture Act Section 416; and
- offer non-concessional resource transfers, e.g., AID Housing Investment Guaranties.

Our program will direct resources from a variety of U.S. sources towards helping Mexico acquire needed technology in five key areas: population, health and nutrition, private enterprise development, agriculture and food production, and conservation and environment.

Part II - Social and Economic Conditions

Basic Social and Demographic Data

Despite dramatic reductions in the population growth rate, from 3.3 percent in the late 1960's to 2.3 percent in 1983, Mexico's population is still increasing rapidly. Estimated at 76.8 million in mid 1984, at current rates it will reach 116 million in the year 2000. The base of Mexico's population pyramid is still disproportionately wide, with 42 percent of the population under age 15 and 70 percent under age 30. Life expectancy at birth has risen from 56 years in 1960 to 67 years in 1980. Death rates declined from 10 to 8 per thousand during the same period.

Despite the growth of health services and water and sanitary facilities in urban areas and many rural areas by 1980, only 58 percent of the Mexican population was estimated then to have access to safe drinking water. Adult literacy is 83 percent.

Urbanization has taken place very rapidly. Over two thirds of all Mexicans now live in urban areas. Internal migration from unproductive rural areas to urban areas has swelled the size of Mexico's cities, with most migrants moving to Mexico's three largest cities: Mexico City (population 16 million); Monterrey (population 2.5 million); and Guadalajara (population 2.3 million). U.N. projections show the Mexico City metropolitan area becoming the most populous urban area in the world in 1990, and its population exceeding 31 million in the year 2,000.

Although firm unemployment data are not available except for certain metropolitan areas, we estimate nationwide unemployment at 15 percent. As rural migrants relocate in the urban areas, adding to existing unemployment pressures, urban underemployment has reached an estimated 40 percent. Hardest hit are the 12 to 20 age group who have little formal education and work as contract laborers or who are self-employed in menial jobs. Although external migration has absorbed a high proportion of Mexico's working age population, job generation has not kept pace with the growing labor force. Net new jobs needed per year to absorb the unemployed and new entrants into the labor force would average about 700,000.

Recent Economy History

When the Mexican and U.S. Governments agreed in 1968 to phase out U.S. bilateral economic assistance, Mexico was enjoying a period of rapid economic growth. Both governments felt at that time that Mexico would be able to satisfy both its technical and financial requirements by direct procurement and borrowing from international financial institutions official bilateral sources such as the Export-Import Bank and foreign commercial sources. Mexico's expectations for rapid economic growth based on oil exports led the subsequent two Mexican administrations to pursue a strategy of stimulating growth through public expenditures.

Late in 1981, high foreign interest rates and a slackening oil market struck Mexico at a vulnerable time. Public expenditures had been rising faster than revenues, and appreciation of the peso was eroding the competitiveness of Mexican products in foreign markets. As the crisis hit in 1982, Mexico's foreign exchange reserves were exhausted, the public deficit reached 18 percent of GDP and the debt service ratio rose to nearly 50 percent of export earnings, all of which set inflation spiraling upwards to 81 percent by 1983.

In an attempt to set Mexico's economy in order, the De la Madrid Administration promptly elaborated a comprehensive stabilization program with the IMF by the end of 1982. The program is designed to set new domestic policies to encourage increased domestic savings, expend non petroleum exports and create conditions for recovery of

the private sector. Mexico's performance during 1983 and 1984 in meeting the goals of its economic adjustment program has been, on the whole, favorable.

This has not been without economic and social costs, however. GDP declined by 0.5 percent in 1982 and 4.7 percent in 1983. Mexico's \$14 billion trade surplus and the generation of a substantial current account surplus (3.8 percent of GDP in 1983) reflected primarily a reduction in imports rather than an increase in exports and the scarcity of foreign exchange.

The World Bank estimates that unemployment rose during the last two years at the same rate as the increase in the labor force, roughly 8 percent.

The De la Madrid Administration recognizes Mexico's need to remain on the path of stable, sustainable growth over the next several years. Mexico's National Development Plan for 1983-1989 sets reasonable targets and provides a common sense policy framework for economic recovery and structural adjustments needed for further economic growth. Recovery and growth will depend upon Mexico's success in reducing and holding down the fiscal deficit, a strong rally by the private sector, productive new investments and growth of non-oil exports, and stimulation of agriculture and manufacturing as the principal sources for new employment. This will not be easy. The World Bank anticipates continued constraint on availability of foreign exchange. Moreover, although Mexico has been successful in reducing its population growth rate to 2.3 percent in 1983, the labor force is expected to increase at close to 4 percent per year, putting increased pressure on the public and private sectors to generate new employment.

Mexico is addressing its structural economic problems with the help of the IMF and the World Bank. Large-scale development assistance is being provided by the international financial institutions. At the sectoral level, there remain critical technology deficits which must be reduced or eliminated to revitalize the economy. The proximity and diversity of U.S. technologies in almost all areas corresponding to Mexico's needs make the U.S. a highly attractive source. Realizing this, the De la Madrid Administration is taking a more positive attitude toward assistance from the U.S.G., and is quietly allowing Mexican agencies (in addition to those responsible for family planning services, which have been receiving U.S. assistance since 1977) to turn to the U.S.G. for technical support for Mexican development efforts.

Part III - AID Strategy

A limited, carefully targeted U.S. development assistance program which addresses Mexico's technical needs in certain priority areas in addition to population/family planning is recommended.

We propose to augment AID resources by working with and through other U.S.G. and privately funded agency programs in Mexico. We would do this by identifying, jointly with representatives of these other agencies, where we have mutual objectives, and programming our respective resources to meet these objectives. (In most cases, a portion only of some other U.S.G. or private agency resources in Mexico need be drawn upon for activities proposed in this paper. This would be done with the advice and consent of these agencies.) We also propose to use combined U.S.G. resources to leverage private U.S. and Mexican resources through matching grants or other co-financing arrangements. In this fashion, we would be able to generate a broadly based but carefully targeted program. As is true in the case of our current population/family planning assistance, the major share of resources would come from Mexican sources.

Our assumptions are:

- that this Administration agrees that it is in the U.S. interest to facilitate transfer of technologies from the U.S. to Mexico;
- that ADCs are eligible for AID-funded technical assistance;
- that AID (and other U.S.G. agencies) will be able to provide the resources requested for uses proposed in this paper;
- that there exists in Mexico's private and public sector sufficient commitment and resources for joint development and research activities; and
- that Mexico's research and training infrastructure in certain fields (e.g., agriculture, public health, population) are available for developmental activities benefiting other developing countries.

The role of the AID Representative in Mexico can be seen as that of a facilitator and entrepreneur, identifying and matching resources with needs and laying the groundwork for long-term, mutually beneficial collaboration. He may draw upon resources of AID/W global and LAC regional technical grants and contracts a) if AID/Mexico can finance travel and local expenses of technicians whose salaries are paid under AID/W-funded grants and contracts), and b) if such activities can be justified on the basis of their ultimate benefit to other developing countries. The full range of resources which he may draw upon include (but are not limited to):

Private:

- Private Voluntary Organizations (PVOs)
- Private foundations
- Universities
- Trade and professional associations (e.g., Chambers of Commerce, labor unions, academic associations)
- The American Institute for Free Labor Development (AIFLD).

Public:

- Housing Investment Guaranties (HIGs)
- Research funded by AID's Bureau for Science and Technology (S&T) and the Office of the Science Advisor; i.e., the Program for Scientific and Technological Cooperation (PSTC), the Board on Science and Technology for International Development (BOSTID), Collaborative Research Support Programs (CRSP) and the Consortium for International Crop Production (CICP)
- The Board for International Food and Agricultural Development (BIFAD)
- AID Bureau for Latin America and the Caribbean (LAC) regional projects e.g., the LAC Regional Training Initiatives (LAC/RTI), Consultants and Seminars and Intercountry Technical Transfer Projects
- Office of Foreign Disaster Assistance (OFDA)
- Programs and services of other U.S.G. agencies; e.g., U.S. Departments of Agriculture, Health and Human Services, Commerce, Energy, Interior, The National Academy of Sciences and the National Science Foundation
- The Trade and Development Program (TDP)
- Interamerican Foundation (IAF)

Multilateral:

- Interamerican Development Bank (IDB)
- United Nations Development Programme (UNDP) and Fund for Population Activities (UNFPA)
- Pan American Health Organization (PAHO)

This paper outlines immediate opportunities for U.S. Mexican collaboration in research, training and institution building. These activities have been selected for the following reasons:

- A) a solid institutional base exists;
- B) participating institutions receive financial support from other non-U.S.A. sources;
- C) the institutions have demonstrated superior administrative and technical capability; and
- D) relatively small inputs from the U.S.A. will generate a high rate of return in terms of numbers of people directly benefited, expanded output, increased profitability, quality of research, etc.

These are criteria which will generally be applied in the selection of any activity under consideration for assistance.

Support of this program will require funds from AID/W project development (PD&S) to cover the travel and per diem of technical support, and the time of AID direct hire and project-funded technicians to assist with coordination and oversight of these activities. A modest amount of "seed" grants funds (e.g., \$2.5 million), not presently available under S&T and LAC Bureau technical projects, will also be needed.

Estimated PD&S requirements per year are:

Agriculture, Rural Development and Nutrition \$ 16,000
Health \$ 8,000
Population \$ 14,000
Special Development Activity \$ 12,000

Part IV- Program Areas

A. Population

Overview

One of the most serious problems facing Mexico is its rapid population growth. With a total 1984 population of 76.8 million, Mexico adds an additional 1.7 million mouths to feed annually. While the current annual population growth rate is still high at 2.3 percent, it has dropped dramatically from 3.3 percent in 1970. Total fertility has also fallen from 6.4 in 1970 to 3.9 in 1984.

Much of the decline in fertility can be attributed to the aggressive family planning program designed to make modern contraceptive services available to all segments of the population. Mexico expects to reach an annual population growth rate of 1 percent by the year 2000. Without the continued financial support from other donors, and particularly from the USG, it would be very difficult for Mexico to accomplish its demographic goal and program objectives.

Because of the relative success of its population programs, Mexico hosted the World Population Conference this August to demonstrate to third country participants the successful results of a decade of effort. Large differences in birth rate remain, however, between the urbanized and non-urbanized populations. The 11th most populous country, Mexico still contributes a large share to annual world population increase. Constraints to be faced during the remainder of the "Sexenio" include: the growing number of women of reproductive age; the 42 percent of Mexican people under age 15; and the difficulties of reaching sexually active youth, the urban poor and remote rural populations. In addition, Mexico's economic crisis in 1982 sharply reduced the financial resources needed to maintain public support of social services, including family planning.

Mexico is nevertheless preparing to meet these challenges. The National Demographic Plan targets have been revised to reduce Mexico's annual population growth rate from the current 2.3 percent to 1.9 percent by 1988 and to increase the total number of contraceptive users each year. It estimates that 60 percent of new users will be served through the public sector (IMSS, SSA, ISSSTE) and 40 percent will obtain services through private or commercial channels.

Special effort is being made to extend services deeper into rural areas and to marginal urban communities, and to increase the number of adolescent contraceptors of all ages.

Projections of Mexico's population to the year 2000 range from 100 million (a 50 percent increase over the 1982 population), a medium estimate by the World Bank of 109 million, to the 136 million (a 100 percent increase) forecast by the American Association for the Advancement of Science. Population estimates are critical for forecasting food needs and demands for health and other social services. Recent progress gives reason to hope for estimates in the lower range. As U.S. Demographer Dudley Kirk points out, however, even in the most optimistic case, by world standards, Mexico's rate of growth will still be high - at least 50 percent higher than in the U.S.

AID Inputs

Contraceptives: Until such time as quality control of locally produced contraceptives is assured and Mexican users are able to supply themselves with low-cost, domestically-produced products, AID plans to continue supplying contraceptives to Mexico for use in both public and private programs. Over the next two years, we plan to supply:

	FY 1985	FY 1986
Pills	-----	5 million cycles
Condoms	30 million	40 million
IUDs	600,000	700,000

Supplies and Equipment: Demand for specialized supplies and equipment which are not locally available continues. These include surgical contraceptive technology, etc. Estimated need for the next two years is:

	FY 1985	FY 1986
-IUD insertion kits	2300	2700
-Minilap kits	1000	1500
-Vasectomy kits	100	300

Training: Demand continues for specialized training in technical areas where Mexico is still weak. Such areas include surgical contraception and operations research. To be supplied under S&T/Pop funded programs, training estimates for the next two years are:

Area of training	FY 1985	FY 1986
Physicians	300	400
Medical students	1,500	2,000
CBD workers	3,000	3,500
Supervisors	200	200
Youth leaders	300	300

Program Support: AID plans to help various organizations to build upon the solid foundations laid over the last eight years with AID assistance. In keeping with our recent strategy not to fund entire projects, we plan to support:

- a) essential program components which might not be funded as a result of local resources scarcity, and
- b) expansion of successful programs to new locations by providing grants for leveraging local resources. The combined resources will establish a capital expansion fund.

In view of AID's population resource constraints, we propose to direct most of our resources to those private sector programs which show the greatest promise of success. These private initiatives are described in more detail below.

Population Strategy

Goal and Principles

AID's goal is to help Mexico expand family planning services to the largest number of users, at the fastest rate, at the lowest cost per user, leaving an institutional base to continue such services.

General Principles: We will observe several principles in pursuit of this goal:

-- Private Sector Resources: Mexico's great need for family planning services is not likely to be met by the Mexican public sector alone. To attempt to do so would necessitate greatly increased public expenditures. At the same time, the present level of resources donated and channeled through the private sector are not yet sufficient to satisfy unmet needs for family planning services. AID will encourage and support local, private efforts to leverage far greater resources from Mexican and international private sources. Our long range objective is to increase self reliance in fund raising and hence the self-financing of private family planning programs to reduce dependency on government budgetary support.

-- Plurality of delivery systems: There will not be any single model of family planning service delivery, nor any single institution that will serve as the mode for family planning services.

Mexico is too large geographically and there are too many discrete segments of the population that require various types of family planning services to justify a single institutional delivery system outside the public sector. It is therefore necessary for AID assistance to work through several institutions and delivery systems to expand family planning services to those not receiving them.

-- Competition: At this stage in the evolution of private Mexican family planning delivery systems, it is important to encourage competition among them to enhance their efficiency, and to observe which emerge as more effective.

-- Innovation: Innovation is not sought as an end in itself. Innovation refers to finding new service delivery mechanisms that expand family planning services at the lowest cost and at the fastest rate. Innovation therefore is an explicit part of the strategy for finding new, more effective and more efficient means of developing family planning service delivery.

-- Institutional Development. AID will support further development and strengthening of the leading national and regional private sector institutions (e.g, FEMAP, PROFAM, MEXFAM) which serve as facilitators for their affiliated local organizations. At the same time, we will continue to assist individual FP programs. Our objective is to develop the organizational capacity of each of these entities to help them become self-sufficient.

Institutional Development

Several major, private family planning services providers will be assisted to expand services throughout Mexico. We have given such assistance to FEMAP, which now operates in many locations in the northern and central part of Mexico.

An effort will be made to identify, or create, appropriate national level organizations to "wholesale" Mexican local family planning institutions needed technical assistance, training, financing, leadership development and mobilization of general public opinion and public support. These "wholesalers", or "brokers", would also serve as intermediaries for external donor assistance to local institutions.

The following organizations will be strengthened and expanded to reach out to difficult-to-reach potential users.

-- Mexican Foundation of Private Family Planning Association (FEMAP): Expand FEMAP's community affiliated associations throughout cities of over 100,000, targeting particularly on marginal areas. The goal is to cover 56 geographic areas by 1988.

-- Commercial Family Planning Promotion (PROFAM): Expand PROFAM's commercial marketing, especially of condoms, through food outlets in rural areas.

-- "AMEPF": A new organization should be created to expand FP services for profit making clinics and physicians. A provisional name is the "Asociacion Mexicana de Entidades de Planificacion Familiar," patterned after the Brazilian organization with a similar name. This national level organization would help in promoting, training, financing, providing commodities, medical equipment and management assistance to affiliated private sector clinics. It would also serve to channel assistance from donor funded cooperating agencies for the many hundreds of potential clinics and physicians in Mexico.

-- Mexican Family Planning Association (MEXFAM): This IPPF affiliate will be assisted to experiment and develop new delivery systems and organizational structures in communities below 100,000 population.

-- Asociacion Demografica Médica: This organization will be helped to evaluate and research systems for improved program management. Some operations research assistance will be "wholesaled" through this organization in such a way as to strengthen its research capability.

Resources

The Population action plan will rely on continuation and expansion of assistance received through AID-funded cooperating agencies. This will include traditional suppliers of assistance: i.e., FPIA, AVS, Pathfinder, FHI, The Futures Group, CDC, Westinghouse, DAI, JEPIEGO, PCS, etc.

In addition, AID's Office of Population is planning a new cooperating agency which will provide specialized assistance to private family planning efforts. This new cooperating agency (which has yet to be chosen) will assist with design innovation, training, technical assistance and the institutional development in the capacities discussed above. As a priority AID country and an innovator in private sector initiatives, Mexico is expected to receive a significant share of resources from this new source.

-- AID Loan Funds: AID's Private Enterprise Bureau has allocated \$4 million dollars for population program loans in FY 1985 which can be applied to commercial activities in the field of population. As suggested above, one or two Mexican institutions now providing quality technical and administrative support will be selected as loan recipients for the "wholesale" procurement of equipment and training. Equipment, training and services would be made available under subloans to clinics and other private service facilities.

-- Fund Raising: A considerable amount of fund-raising experience by private sector FP entities has been gained in Mexico and other countries. In some countries, local institutions can obtain anywhere from 40 - 60 percent of their operating expenses through fund raising. Our objective is to assist private, non-profit family planning entities to raise their own operative funds. With AID help the highly successful FEMAP and PROFAM could make their fund-raising expertise available to other organizations.

-- Other Sources: The Office of Population has requested a Task Force of Cooperating Agencies to propose ways of increasing self reliance for private F.P. entities. The Task Force will explore a variety of ways to raise income, reduce costs, recruit volunteer support and donated equipment, land, and facilities: This body of knowledge will be imported to INTERALIA, a qualified Mexican technical institution (and likely loan recipient) selected to assist the numerous, local private entities.

-- AID Staff: The AID Representative will need assistance to undertake the extensive development and new initiatives in the population field. A local private sector development officer position will be contracted to help plan, coordinate and monitor AID's population program in Mexico.

Voluntary Surgical Contraceptive (VSC)

VSC is already the second most popular method in Mexico after temporary conventional contraceptive methods. Initiatives to increase VSC acceptance will be explored.

-- Private Clinics: Mexico's extensive network of private clinics could offer VSC services to men and women. Experience in other countries, e.g., the Sao Paulo experiment in Brazil, indicates that by offering training, equipment, and loans for expansion of facilities, many clinics will offer VSC services. Training and equipment are available through local AID-assisted cooperating agencies (CAS). Loan funds for expansion capital must be arranged, and a local "broker" to contact and provide program resources and independent clinics must be recruited.

-- Using the Private Sector to Make the Public Sector Work: The Monterrey affiliate of FEMAP (Pro-Superacion) has successfully incorporated a privately financed and supervised surgical contraceptive team into one of the Secretariat of Health hospitals in the city. The inclusion of this surgical team, along with an outreach group of community promoters, has increased patient flow by 70 percent. This is an example of where a public facility has been made to work more efficiently with the addition of a small, private unit. This experience could be applied in other locations for effective and relatively low cost utilization of a public facility.

-- Other alternatives: Existing delivery systems which might offer VSC services as well as temporary contraceptive services include Red Cross Clinics, Municipal Hospitals, not incorporated under the Secretariat of Health (SSA) system and University Hospitals. Such facilities are numerous but scattered in strategic urban areas throughout Mexico. A determination of the cost-effective use of VSC and conventional contraceptive services by these facilities must be made.

-- Operations Research to Test Innovative Delivery Systems in the Private Sector and Creative Means of Financing.

Innovative operations research activities will be designed to improve service delivery and operational effectiveness of private family planning delivery mechanisms in such a way as to demonstrate to the government that contracting for private sector services may be more cost-effective.

New Initiatives

Alternative modes of service delivery that will be explored are the following:

-- Factories: Many factories in Mexico have nurses or infirmaries which meet the immediate, basic health needs of factory employees. Some of these factory infirmaries provide family planning services and education. One of Mexico's objectives is to expand the availability of family planning services within the working place. Factory owners/managers have frequently been slow to understand that their costs increase as pregnancies cause absenteeism and resignations require training of new replacements. We plan to support an operations research study to determine the cost/benefit for private firms considering provision of family planning services. The findings should quantify potential cost savings, and provide persuasive evidence of the benefits of working place family planning services.

-- Pharmacists: Contraceptives are available in 90 percent of the 12,000 pharmacies in Mexico. About 25 percent of all Mexican contraceptives users buy contraceptives from pharmacies. The PROFAM social marketing program works with retail outlets and provides training to pharmacists and pharmacy workers. Additional training is needed, however, to enable pharmacy workers to counsel customers on the most suitable method for them. Contraceptive manufacturers will be approached for financial support of this training.

-- Micro vendors: Limited but successful experiments suggest the possibility of enlisting hotel clerks, parking attendants, small retailers, etc. as contraceptives micro vendors. The earlier experiments should be evaluated and the concept tested in various locations in Mexico.

-- Generic advertising: The hypothesis that extensive advertising in the mass media - television, press and radio - of certain contraceptive products increases their utilization must be tested. Except for PROFAM social marketing advertising, no mass media advertising of contraception, either by brand name or generically, has taken place in Mexico.

We propose to design an advertising program which offers an incentive to the commercial sector to help finance the program. If generic advertising proves to be successful, this would obviate the need to develop a more expensive social marketing program.

-- TV soap operas: Mexico's Televisa private TV network produces six soap operas (of from 100 to 250 episodes each) with family planning messages. However, Televisa must be encouraged to continue this practice. Building a relationship between Televisa and FEMAP could stimulate expansion of FEMAP through daily promotion in soap operas while improving the message content of Televisa soap episodes.

-- CONASUPO: Through its network of over 10,000 stores, the state owned supplier of basic foodstuffs, CONASUPO, will offer contraceptives. Proceeds from contraceptives sales will cover handling and administration costs. AID will supply the contraceptives.

B. Health and Nutrition

Reflecting the achievements in birth rate decline, the 1970s saw also a reduction in infant and child mortality (from 91 per 1,000 live births in 1960 to 53 in 1982). In adult death rates, the nation's life expectancy rose from 62 years in 1970 to 66 years by 1982. A major challenge remains, however. Although one third of Mexicans now live in the seven cities of over 500,000 people, over one-third still live in localities of less than 3,000. (There are 82,000 localities with less than 500 people.) Mainly subsistence economies, these remote communities have poor access to means of transportation and communication. An estimated 22 million suffer from malnutrition and live in inadequate shelter; many lack access to potable water and adequate sanitation. Many of these people (who represent over 50 separate linguistic groups) still follow values and norms which favor high fertility (70 per 1,000 in some locations) and counterproductive practices in pre-natal and post-natal care.

The SSA and IMSS are successfully extending basic maternal and child health, and primary health care as well as family planning and referral services into some of the rural areas. According to Mexican government reports, the program covered nearly 100% of communities of 500 to 3,000 population by 1980. That year marked the start of extension of primary clinics into the most dispersed communities of under 500 people. Children in these communities are being sought first for oral rehydration therapy (ORT).

Similar conditions can be found in the crowded marginal urban "barrios" which are swollen with people, many of whom are recent arrivals from the rural areas, who have not been reached by public or private social services.

AID Health and Nutrition Assistance

The Mexican government has asked for AID support in health and nutrition, but continues to rely heavily on the Multinational Development Banks and the U.N. agencies. To date AID has only made modest contributions, however:

- a matching grant in 1979 to the private voluntary organization Project Concern International, which is helping to expand outreach of basic health and family planning services based in PCI's hospital and clinics in the city of Tijuana;

- a small grant in 1979 to help finance a joint University of Wisconsin-Mexican Government food policy seminar which contributed to restructuring Mexico's food production and agricultural policies;

- a CRSP, "Functional Significance of Marginal Nutritional Deficiencies", which is studying the effects of nutrient deficits in Mexico as part of a long-term, worldwide collaborative study by ADC and U.S. institutions of new applications of technologies to resolve food shortages and malnutrition.

Humanitarian food assistance to Mexico was resumed in FY 1983 with the initiation of the Dairy Donation Program established under Section 416 of the Agricultural Act of 1949, as amended. Section 416 provides for the donation of surplus dairy products held in USDA inventory to meet humanitarian, developmental or emergency needs overseas. Because of its ADC status, Mexico no longer qualifies for Title II. However, given Mexico's inability to meet internal demand for milk and dairy products, and the difficulties importing these commodities caused by foreign exchange scarcity, the Section 416 program is a valuable source of these needed commodities.

In FY 1984, six U.S. and Mexican voluntary organizations received a total of \$52.8 million in Section 416 commodities.

D.I.F. (National System for Integral Family Development): The DIF school feeding program depends on Section 416 commodities as inputs into a variety of foodstuffs prepared for national distribution. Commodities also serve social assistance centers for the handicapped, mentally ill, elderly and destitute poor. The overall program objectives are to improve the quality of life of poor Mexicans by providing a more balanced diet, striving to decrease the mortality rate, and offering a comprehensive education.

International Partnership for Human Development: Given a four year drought in many areas of the country, inflation, and a greatly devalued peso, food staples have become extremely expensive for the average Mexican. The poor have been radically affected by food shortages and rising prices. Over 50 percent of children under the age of ten suffer from some form of malnutrition. In light of the serious economic depression faced by the country, the Mexican Catholic Bishops, through two local voluntary organizations, have devised a feeding program. Low income families experiencing unemployment and underemployment, pre-school children, elementary students, the aged and the orphans receive Section 416 food donations through neighborhood organizations.

Friends of Our Little Brothers: This Section 416 donation provides supplemental food for 10,000 orphans lodged in various orphanages throughout Mexico, all of which are under the auspices of Institutions of Private Assistance (IPA).

S.H.A.R.E.: The principal objective of the SHARE program is to encourage the needy towards a return to self-sufficiency through provision of an adequate food supply. Section 416 commodities act as a dietary supplement to all ages of poor in the Tijuana/Mexicali area, the aim being to "halt the downward spiral." Program participants are identified by individual parishes. Another objective of the program is to recruit individuals from among program recipients to assist in distributing foodstuffs, and to become involved in the overall administration of this initiative.

Christian Outreach Appeal: The Lutheran Border Concern Ministry, in collaboration with Christian Outreach Appeal, conducted a survey which identified over 32,000 severely impoverished and malnourished people in various locations of Baja California. It is estimated that children constitute 75 percent of the most seriously afflicted. Section 416 food recipients are registered at seven distribution centers, where they receive food and clothing packages.

Mexican Christian Children's Aid: Through this program, a variety of orphanages in Baja California receive food assistance. Additionally, commodities reach needy peasant families in areas being influenced by Communist workers groups.

AID Health and Nutrition Strategy

Mexico poses a dichotomy in health care. Mexico's large, poor populations still demand basic health care. AID will make available U.S. technical expertise to help build Mexico's capability to meet these needs. A Pritech Sector assessment for ORT is planned for FY 1985, which will recommend appropriate program development. Food donations to Mexico's needy will be continued under Section 416 programs.

At the same time, Mexico enjoys a highly developed bio-medical capability, a large and growing pharmaceutical industry, and well appointed and staffed health care training facilities. AID proposes to capitalize on the unique opportunities which Mexico offers for joint bio-medical and basic health care research which will be directed towards benefitting other third world countries suffering from the debilitating health and nutrition problems which Mexico is now seeking to resolve. The most promising areas for joint research to be sponsored and founded by AID's BOSTID, PSTC and S&T Bureau grants are:

- A) treatment of diarrheal and respiratory diseases;
- B) low-cost basic health care (i.e., investigation of ways to increase service productivity while decreasing service costs through improved management, program targeting, diagnosis and surveillance, and staff training;
- C) pharmaceutical production; and
- D) specialized training (e.g., in biostatistics, epidemiology);
- E) bio-medical research that would also benefit other LDC's

Oral Rehydration Therapy

Mexican health service statistics for 1979 (the latest year for which completed tabulations of health service data are available) indicate that for that year, 41,806 deaths of children under five years of age were due to diarrhea, with an overall incidence rate of 400 per 100,000 population. (These figures are subject to under-reporting, resulting from the lack of access of more remote populations to health services.)

Mexican public and private agencies are taking action against such losses in lives and health status by establishing oral rehydration therapy (ORT) programs. Although actions to date have been sporadic and data on these activities are not readily available, a basis for a national ORT program is being laid. The Social Security System has undertaken pilot projects in two states. PROFAM, a private family planning organization, has begun a program, aided by a 1983 grant from the Population Crisis Committee, to market OR salts tablets through its distribution chain. PROFAM has requested assistance from the S&T-funded PRICOR health operations research project for conducting market research on its sales program. Realizing the market potential of OR salts, a local drug industry is manufacturing 1/2 and 1 liter bottles of salts solution for marketing through drugstore chains.

The most effective mode and distribution for ORT and its potential impact have yet to be identified. SSA and the Social Security System reportedly favor pre-prepared ORT "packets", while the National Institute for Nutrition favors distribution of OR salts for home preparation.

The Mexican Government plans a coordinated national ORT program targeted on the neediest children 0-4 years old (totalling over 8 million) through all health services and many commercial outlets. We would recommend that the program begin by evaluating ORT efforts to date and building an ORT infrastructure using the most successful method. AID can assist by: 1) training health care staff from various health care organizations, 2) preparing instructional materials, and 3) laying down a logistics system. Mexican program administrators estimate that these steps may be accomplished in 3 years. They are seeking help from the U.N. through UNICEF and PAHO, and from AID. It is expected that most of the cost of this program will be mobilized locally.

Resources:

AID: a) PRICOR; supports research and pilot projects in primary health care technology. (PRICOR provides no service program finding.)

b) PRITECH; also develops primary health care technology, principally ORT, by providing technical assistance for service support; primary health care services (in LDC locations which lack them); and service strategy design. Mexico has been eligible only for ORT program strategy design.

U.N.: WHO , PAHO, UNICEF

Mexico: The government and private sources and industry.

C. Private Sector Development

The Mexican Government professes the need to encourage economic growth through free enterprise rather than solely in a mixed private/public/cooperative system. However, it still has a way to go to create a more encouraging climate for private domestic and foreign investment. Problems needing to be addressed include:

-- Most (although not all) of Mexico's programs for executive and middle level business management are ideologically oriented towards state control and economic principles that are incompatible with a free enterprise system. Many Mexican institutions of higher learning wish to reorient their curricula away from strictly theoretical concepts to better serve the needs of the private sector.

-- Some entrepreneurs also see the need to develop financial and technical assistance programs which meet the needs of medium and small enterprises (whose executives and managers are less likely than those of larger enterprises to be educated in the U.S. or Europe). Micro, small and medium enterprise, which comprise 96 percent of the firms in Mexico's private industrial sector, have largely been overlooked and poorly served by Mexican institutes of higher education as well as by financial and economic policies.

-- Except in a few major cities, detailed labor force data are not routinely collected. The same is true for data on private industry. That which is collected is not widely available. Lack of these data hinders industrial planning as well as skills training which matches industries' current and projected needs.

Economic recovery and growth is going to depend largely upon expansion of exports of non-oil products. But poor access to foreign market information and trade data by industries seeking to export their products to the U.S. and other overseas markets hinders efficient trade expansion.

Rational distribution of Mexico's highly mobile labor force poses a major challenge. Greater job opportunities along the border and in the largest urban centers have attracted many thousands of job seekers away from their home states.

-- Like its predecessor, the Development Plan for 1983 - 1989 calls for location of in-bond industries in Mexico's interior to promote industrial development away from the border and the largest cities. Interior development of these industries during the previous sexenio (Six-Year Plan) was hindered, by the lack of necessary planning and feasibility studies, and later by the recession.

-- The supply of adequate shelter and services has not kept pace with demand in the border and major urban centers. Shelter construction in their marginal neighborhoods is "informal", i.e. without adequate water, sewage, electricity and transportation. Community financial organizations must be helped to plan and finance community-based shelter and services.

Mexico can be helped to address these constraints to private sector development by modest amounts of carefully targeted support. The following activity descriptions illustrate how this may be accomplished.

Micro-enterprise Development

The number of micro-enterprises and small businesses in Mexico totals several million. Located throughout the country but concentrated in lower income and marginal "barrios" of cities, they are proprietorships which employ from one to twelve employees with total assets of up to \$5,000. An estimated 32,000 micro-enterprises (excluding service industries) were identified in Monterrey alone.

Four years ago, one of Monterrey's well respected and public spirited businessmen conceived of a program to serve the special needs of micro-enterprises. His idea and efforts combined with technical assistance supplied by ACCION/AITEC, an IDB loan and private donations, established and funded the Asesoria Dinamica a Microempresas, A.C. (ADMIC), a private, non-profit organization designed to help Monterrey's microbusinessmen meet their financial, technical and management needs. The "Arthur D. Little" of micro-enterprise, ADMIC works directly with individual micro-businessmen and women to help them define their problems and identify their needs, set up an accounting system, analyze their costs, production requirements, and needs for technical upgrading and expansion. It then assists them in obtaining loans and technical training (provided voluntarily by Monterrey Institute of Technology (ITESM) and other sources).

Structured like most private family planning and rural development programs, ADMIC's "promotoras" go out into the community, contact micro-entrepreneurs and arrange services for those that want them. In three years, ADMIC promotoras have made 4,188 contacts, of whom over 600 have become active ADMIC members. 250 ADMIC members have borrowed in the range of from \$300 to \$700 (at 37 percent interest -which is well below the inflation rate - and one year repayment). To date, none have defaulted despite economic hardships.

According to ADMIC, an investment of \$270 is required for each new job created in micro-enterprise (compared with \$13,000-\$15,000 dollars in small and medium enterprise) in Monterrey. Many ADMIC members have expanded 100 to 400 percent with their modest loans. A study conducted by the University of Nuevo Leon demonstrated that despite the severe reverses suffered in Monterrey during the economic crisis (GDP declined an average of 3 to 4.7 percent nationwide and 10 percent in Monterrey with unemployment reaching 12.5 percent in the third quarter of 1983), ADMIC members fared better than a sample of non-member micro-business.

ADMIC staff is presently operating at full capacity but has been able to reach only a small percentage of potential clients in the city of Monterrey. ADMIC hopes to expand its operations and coverage in Monterrey and eventually to the surrounding metropolitan areas with a grant from the IAF and a loan it is seeking from the IDB.

Of immediate benefit to AID would be replication of this type of service in other developing countries. With financial assistance from AID, ADMIC would be able to offer a two or three day orientation course for private sector leaders and a month-long training program for microenterprise development managers from other countries.

Resources:

AITEC, Development Associates
Third Country Training

Development of Private Enterprise Oriented Programs
in Business Administration and Management

Interested in upgrading and reorienting their programs in business administration to make them more responsive to the needs of the private sector, administrators of several Mexican institutes of higher learning have approached AID and USIS over the last few years for help. They are attracted to the objective and technically-oriented curricula focused on the needs of private enterprise which are offered by schools of business administration and management in the U.S. In addition, some Mexican institutes of higher learning, such as the Autonomous University of Puebla and the University of Chiapas, are particularly interested in designing programs which address the needs of directors and managers of small and medium enterprises.

Top administrators and faculty from one or two leading Mexican private university schools of business administration will be provided fellowships to study at prestigious business faculties in the U.S. Their study curricula will be designed to broaden and reorient their own programs away from a predominantly theoretical approach to one which emphasizes problem-solving through case studies. This would enable these schools to offer academic programs for administrators and faculty of other business schools in Mexico and in other countries interested in strengthening their training programs for executive and middle level managers and professional staff.

With help from USIS, Mexican faculties of business administration will be carefully surveyed. One or two will be selected on the basis of their academic qualifications, standing in Mexico's private business community and current program focus and content. We will also assess their ability to raise funds from private sources for program expansion.

USIS and AID/Mexico will select a coordinator from the local academic community based on strong academic qualifications and ties with Mexican and U.S. business administration programs and the Mexican business community. The Coordinator will be asked to draw up an operating plan detailing resources, U.S. and Mexican institutions and modes of interchanges for USIS/AID approval. Prominent figures from the academic and business communities may be invited to serve as program advisors.

As feasible, USIS will apply portions of the various programs which it administers, e.g., The Fulbright Fellowships, Scholars In Residence and University linkage programs and LASPAU Scholarships (which help to support U.S. recipients at Mexican universities and Mexican recipients at U.S. universities) to support faculty development and curriculum design for this program. AID will likewise reserve a portion of LAC/RTI scholarships.

Resources:

USIS fellowships
AID LAC/RTI
International Executive Service Corps

Small and Medium Industrial Surveys for Skills Training

Several Mexican technical training institutions have asked for assistance in expanding and upgrading their programs and in acquiring available new technologies. An essential first step is a survey of Mexican industries to develop baseline data of skills in demand. This data will provide training institutions with the information base they need to redesign training curricula tailored to industries current needs.

The survey will seek information on the size (assets and earnings), type of industry (service, manufacturing, construction, etc.), market size, number and type of employees and technical skills required. From these data, profiles of small and medium enterprises for each sector can be constructed. These profiles will serve as the basis for designing special skills training programs.

Because a nationwide survey would be too complex and costly to mount at one time, in the interest of conserving scarce economic and human resources, the survey will be phased by sector and by size of metropolitan area. It should begin with those sectors which are the largest employers of skilled and semi-skilled workers and start in the largest cities. Subsequently it could be expanded to secondary cities and eventually to semi-urban municipalities.

AIFLD is proposing to integrate the trade union movement into its vocational training, apprenticeships, on-the-job training and job upgrading in several countries in Latin America. We will look at the possibility for building AIFLD into this project.

AID/Mexico will seek local private funding for the survey. Once funds are secured, AID will (a) facilitate a contract with a private organization to work with IPADE, the chambers of commerce and AIFLD, in designing and organizing the survey, and (b) oversee the analysis and development of industry profiles and the design of a system (including financing) for periodic surveys.

Resources:

-The Instituto Panamericano de Alta Direccion de Empresa (IPADE), a respected school of business, has expressed interest in coordinating the survey and establishing its own training program for small entrepreneurs. Alumni executives and managers in Mexican industry will be invited to participate in the survey.

-Mexican Chambers of Commerce: With a nationwide network of members, the Chambers of Commerce are also needed to coordinate the participation of their members as well as contributions to this service from Mexico's private sector.

-AIFLD: AIFLD does not have a program in Mexico although AIFLD has assigned a representative to ORIT, the Regional Organization of International Labor, located in Mexico City. AIFLD also pays for training of Mexican labor leaders. AIFLD's contacts with Mexican labor will be useful in setting up and gaining labor cooperation with the survey, as well as helping to finance part of the costs.

NTIS Commercial Trade Information Program

The U.S. is Mexico's largest trading partner, and Mexico is the U.S.' third largest (after Japan and Canada). Trade could be facilitated by easier access by Mexican export industries to U.S. trade and market information. The U.S. Embassy Commercial section (as well as the Chambers of Commerce in Mexico) receives many requests for information on how to do this, and seeks to be helpful. There is no single body of U.S. regulations constituting an import law, therefore the Commercial Service must refer inquiries to numerous U.S. federal, state and local sources of information. Advice could be given more efficiently, and more industries could be reached, if information collection and provision were systematized.

The U.S. Department of Commerce-funded National Technical Information Service (NTIS) program provides two services in Mexico. First, it serves Mexican industrial needs for technical information through its technical information service which operates in Mexico through "Innovacion Informacion Tecnologia" (INFOTEC). To its member educational institutions and industries, INFOTEC provides NTIS technical publications and manuals, and, on request, conducts a computer search of technical material for a fee. Secondly, NTIS/Mexico produces commercial trade information on U.S. and Mexican industrial sectors for U.S. clients which includes market research studies on key subsectors.

To serve the needs of small and medium Mexican industries as well as larger industries seeking to export their products to the U.S., it is suggested that NTIS expand its services to include the following:

- a) Identification of promising export opportunities in the U.S. by sector;
- b) Cataloging of U.S. federal, state and local import regulations, customs procedures, and G.S.P.
- c) Methods to estimate the size of the U.S. market for various types of products, approaches to advertising in the U.S., and U.S. regulations governing quality control and production standards, etc.

NTIS could be contracted to compile these data, regulations and guidelines and to design a system for the periodic update and transmittal to local centers in Mexico for easy access by interested firms. (Because of the high volume of regulation at the state and local levels, only states and local municipalities with greatest opportunities for Mexican exporters need be included.).

Every Mexican manufacturing company must, by law, belong to a Chamber of Commerce, one of which exists for each class of industry. Most of these chambers are affiliated with one of two federations of chambers of commerce, Camara Nacional de la Industria de la Transformacion (CONACINTRA), and Confederacion de Camaras Nacionales de Comercio (CONCANACO), both of which could contract

NTIS to provide this service on a continuing basis. NTIS/Mexico publications and manuals could be distributed to industries subscribing to this service through the chambers of commerce.

This service might also be made available to industries in other Latin American countries through NTIS operations in these countries. Costs of distribution could be defrayed by fees charged to local industries directly or through chambers of commerce and industry.

Resources:

USDOC: Source for U.S. federal importing and marketing data and regulations and NTIS services in Mexico.

U.S. and Mexican Chambers of Commerce: sources and channel for state and local level importing and marketing data and regulation.

IMCE

Feasibility Study for the Creation of
"Maquiladora" Industries in the Interior

The "Maquiladora" industries have proved to be beneficial to both the U.S. and Mexico. The Mexican government created the border In-Bond industry program in 1965, under which parts and materials produced in the U.S. are assembled in Mexico for reshipment to the U.S. for domestic and export markets. Favored by Mexican investment laws which waive foreign ownership restrictions and preferential U.S. tax provisions which charge duty only on value-added in Mexico, maquiladoras have flourished along the border. In mid 1984 they were employing over 196,000 workers, 80 percent of whom were women. In Ciudad Juarez alone, the number of maquiladoras has grown to 162, employing 76,000 people. An additional 13,000 industrywide jobs are predicted by the end of 1984.

Border maquiladoras are outstripping their municipalities' ability to provide adequate shelter and services. Ciudad Juarez provides water to only 825,000 of a total population of over 1.2 million, and the availability of public transportation is limited. Some plant managers are reporting an employee turnover rate of 10-12 percent per month, as employees leave to seek jobs closer to their homes and better non-cash benefits and working environments. Industrial park developers are turning their attention to Mexico's interior and are starting to negotiate joint ventures with U.S. and third country firms.

The Trade and Development Program (TDP) might explore the possibility of helping to plan and finance a feasibility study for the creation of maquiladoras in the interior. The results of the study should facilitate U.S. investment in the interior as well as aid in creating job opportunities for hundreds of Mexicans in or close to their home states. The study could be advertised, contracted, and completed by the end of 1985 (halfway through the sexenio).

Resource: TDP Section 661

Low Cost Shelter

Transient workers attracted by job opportunities in the maquiladora industries are imposing great pressures for low cost shelter and services in the border cities. Laborers seeking work in the larger industrial cities in Mexico's interior are settling in marginal neighborhoods, creating similar pressures for adequate shelter and services as well as employment opportunities. If we assume that the pattern prevailing in most developing countries applies to the marginal neighborhoods of these cities, less than one third of housing is produced by the formal sector. Where low family incomes cannot afford to build or purchase conventional housing, shelter is self-constructed. Municipal provision of water, sewage, electricity and legalization of property tenure may follow, but very often after the marginal communities are well established.

Aware that demand is outstripping supply, Mexico's active federal housing sector is seeking solutions. The Fideicomiso Fondo De Habitaciones Populares (FONHAPO) plans to produce 25 percent of publicly-funded shelter solutions, channeling funds through state housing organizations. The Secretaria de Desarrollo Urbano y Ecologia (SEDUE) is focusing on shelter and environmental problems in the border areas. But local municipalities need financial and technical help to expand adequate shelter and services (as well as job opportunities) into the marginal neighborhoods.

External assistance may be available through AID to help identify strong local financial organizations and community action groups, and help them to assess needs for low-cost shelter and services. These groups can be helped to plan programs in their communities to obtain financing for home improvement, and sites and services construction.

Support should be phased, beginning in the border areas (Ciudad Juarez, Tampico, Tijuana) and later in Monterrey and other interior cities. Housing Investment Guaranties (HIGS) may supplement locally available financing of shelter and services.

Resources:

AID:

- Cooperative Housing Foundation (CHF). Under a Specific Support Grant, CHF is providing technical support for needs assessments for low cost shelter, water and sanitation services and employment opportunities in low income communities, identifying strong local financial and civic organizations through which to plan and implement solutions. It is also assisting them to obtain needed financing.

- HIGS

MEXICO:

- FONHAPO

- SEDUE

- State and local financial organizations.

D. Agriculture and Food Production

Mexico's agricultural sector has developed unevenly. Most of Mexico's small farmers (campesinos) are "ejidatario" families with a common right to farm on public lands (ejidos) set aside for their use. They occupy about 43 percent of Mexican farmland. The quality of most of this land, located mainly in arid and rainfed areas, is poor. Although they comprise well over 60 percent of Mexico's farmers, they produce less than 10 percent of agricultural output, barely enough for subsistence. Except for the few who are situated on more favorable lands and are contributing to commercial agriculture, these small farmers have not yet adopted modern farming techniques. In contrast, one third of Mexico's best cropland is owned by 15 percent of Mexico's farmers who employ modern farming techniques.

One effect of this dualistic rural growth pattern is an increasing dependence on imported foods because ejidatarios cannot produce cash crops in any significantly commercial way. Adoption of "green revolution" seed varieties by large farmers and the rapid increase in irrigated areas helped production to burgeon, growing at an annual rate of 5 percent between 1950 and 1965. However, the drought nature of Mexico's climate, increased population pressure, and, to a lesser extent, diminishing returns from high-yielding varieties in some areas resulted in a slowdown of this rapid growth. Between 1965 and 1978, Mexico's agricultural growth rate averaged only about 1.4 percent annually. Production once again lagged behind demand. Mexican grain imports more than quadrupled between 1976 and 1980, and Mexico now ranks among the world's four largest importers of grains and oilseeds.

Un- and under-employment is particularly acute in the rural areas because of the lack of work opportunities and the seasonal nature of agricultural employment. Another basic problem is that prices for agricultural products, which are controlled by the government, had always been set below costs of production. Recent massive adjustment in prices paid to farmers are only now beginning to correct this situation. Pressures from the urban areas, particularly from organized labor, force the government to maintain low prices for staples, such as tortilla, corn, beans and bread, by means of subsidies.

The World Bank estimates that with appropriate price and investment policies, agricultural growth of 3 to 4 percent per year is possible.

To help Mexico carry out its objectives to increase production of basic foods, there are ways we can help. Through existing programs, including the Bilateral Agreement for Scientific and Technical Cooperation, USDA, the Dept. of Commerce and AID are already supplying technical assistance and training in high priority areas: arid lands, agriculture, livestock and fisheries and new crops

development. These programs are consistent with Mexican government food and export priorities which include cattle raising, fisheries development and export agriculture. To the maximum extent feasible, our assistance will be directed to small farmers and institutions serving small farmers to help increase their share in commercial agricultural production.

U.S. assistance will be concentrated on providing specialized training and supporting collaborative research and institutional development to help certain Mexican institutions to expand their capability in these areas. (This assistance will not conflict with U.S. congressional restrictions on technical and financial assistance to foreign producers competing in U.S. markets).

Arid Lands Center Development

As much as 70 percent of Mexico's land area is semi-arid or arid. Most of this land is marginal or submarginal precisely because of low rainfall and the lack of available farming technology through extension services. At present, Mexico has no centralized capability for research, training, and extension services in arid lands agriculture. Through existing programs, AID and the USDA can help to establish an arid lands center in Mexico.

The first step will be to design a full curriculum which offers both technical and professional degrees in arid lands agriculture as well as an extension service. Areas of concentration should include: arid lands extension services, small irrigations systems, arid lands management, cropping systems, etc. The proposed arid lands center will be open to farmers and agricultural scientists from other countries e.g., Peru, Brazil, and many countries in Africa, which contain populated arid and rainfed areas. BIFAD can identify qualified U.S. and foreign training and research institutions interested in providing technical assistance, and undertaking collaborative research. AID will contract a leading arid lands center in the U.S., such as the University of Arizona, to coordinate technical inputs and research supported under centrally-funded projects and research grants. The contractor will arrange for training in relevant disciplines at these U.S. institutions, which can be funded under the LAC/RTI and the USDA program for graduate countries.

Inland and Marine Fisheries Development

The Mexican Government is encouraging the development of inland fish farms and marine fisheries to expand production for domestic consumption and export. Mexico has asked the U.S. for assistance in this effort. Prior research and commercial exploitation of eels, some ocean fish, shellfish, talapia and catfish, for example, demonstrate a strong potential for this low-cost production in inland/marine fisheries.

Technical support to Mexican counterparts will identify what needs to be done to create and expand fisheries, e.g., feasibility studies and marketing studies of domestic and export markets.

The U.S. National Marine Fisheries Service of the U.S. Department of Commerce (NOAA) has offered to provide technicians to assist this effort. Travel and local costs would have to be funded from other sources.

BIFAD will be asked to identify a U.S. university, e.g., Auburn University or the University of Rhode Island, which has unique capability in fisheries development to take the lead in coordinating technical assistance and research from and by qualified U.S. universities.

The LAC/RTI and the USDA Advanced Training Program for AID-graduated countries will arrange for academic and practical training at participating U.S. universities and fisheries.

Resources:

U.S. National Marine Fisheries Service
USDA: Advanced Training Program
AID: BIFAD, LAC/RTI

Development of New Commercial Crops

Research on new commercial crops has demonstrated several varieties which show strong commercial potential. Many of these crops (e.g., aloe, jojoba, guayule, acacias, the tepary bean) are well suited to arid areas. In some cases, e.g., guayule, production for commercial exploitation is being tested. Applied research and experimentation are needed to determine appropriate means of low-cost production and market potential of these crops. Mexico is particularly well suited for development and testing of new commercial crops for arid lands because of its climate and topography, the availability of technically competent institutions and scientists, its proximity to the U.S. and other potential markets and Mexico's incentive to improve conditions and agricultural yield and incomes of 85 percent of its small farmers. The results of this project also will be useful to other developing countries with large, currently unproductive arid and rainfed areas.

Initially, AID/Mexico will work through BIFAD to a) compile the results of research and experimentation in new commercial crops development, b) select those that show the greatest commercial promise, and c) prepare a work plan. This plan will provide a scope of work to serve as the basis for interested U.S. and Mexican research institutions and agribusinesses, as well as manufacturing companies and industries interested in financing and carrying out applied research on new commercial crops.

Resources:

AID: PSTC, BOSTID, CRSP, CICP, BIFAD
U.S. and Mexican private foundations
USDA
Private agro-industry contributions

Livestock and Dairy Sector

Mexico is a major producer of livestock for beef and dairy products. The U.S. has traditionally been a major importer of Mexican beef for manufacturing purposes. Mexico cannot, however, meet internal demand for milk and dairy products. Livestock and dairy production are therefore among Mexico's development priorities.

Rich in indigenous sources of potential livestock feeds such as bagasse, rice husks, citrus and pineapple wastes, Mexico is an appropriate site for research and experimentation in augmenting traditional feeds to provide a balanced and less expensive feed ration for beef and dairy cattle. Moreover, Mexico enjoys advanced local capability for agricultural research and experimentation at the Monterrey Institute of Technology and certain agricultural centers. Mexico can benefit, however, from successful U.S. technology in this area to build its own commercial capability. Note: There is no national livestock institute.

BIFAD, with USDA assistance, will be asked to coordinate a joint U.S./Mexican research program to test the appropriate composition, potential demand and costs of production of low-cost feeds using locally available plant byproducts, soy and other imported nutrients.

Resources:

AID:

- S&T-funded research activities
- CICP
- BIFAD

Private:

- The American Soybean Association, a private cooperative of soybean producers.
- The U.S. Feed Grain Council

E. Conservation and Environment

Industrialization and urbanization have taken place so rapidly in Mexico that they have outstripped Mexico's capacity to apply and enforce controls on the most negative by-product - air, ground and water pollution. Mexico is caught in the difficult and costly position of having to apply these controls after the fact. At the same time, Mexico's rapidly growing rural population has reduced scarce forest areas at a very high rate every year to meet its needs for farmland and fuelwood.

Aware of the deleterious environmental effects as well as the frightening health statistics directly related to Mexico's severe environmental pollution, the two recent sexenios have advanced Mexico's technological capability in aspects of environmental conservation and the control of toxic wastes. Gaps remain, however. More serious is Mexico's apparent difficulty in enforcing pollution control laws already in effect.

Under two agreements, the U.S.-Mexican Mixed Commission for Scientific and Technological Cooperation and the U.S.-Mexican Border Environment Agreement, the U.S. and Mexico are working together to find solutions to these problems. Mexican and U.S. scientists collaborate in many areas of scientific research in biological diversity, environmental health, atmospheric studies, etc. The U.S. is particularly concerned that the Mexican Government follow through on the Border Agreements to control the air and water pollution which are adversely affecting Southern California coastal waters and several communities along the 2,000 mile long border.

Better solutions must be found also to control deforestation. AID's Office of Foreign Disaster Assistance is providing training in wildfire suppression. In addition, Mexico must be encouraged to experiment with available reforestation methods which may serve industrial and consumer needs at the same time as they control the destruction of the remaining forests.

Reforestation

The previous and current Mexican administrations have been very concerned about the depletion of Mexican forest areas and have placed high priority on their preservation and reforestation. In the late 1970's, Mexico and the U.S. signed an agreement for technological exchanges to be carried out by the Secretaria de Agricultura y Recursos Hidraulicos (SARH) and the Secretaria de Desarrollo Urbano y Ecologia (SEDUE) and the USDA Forest Service. (SARH is charged with responsibility for preserving what remains of Mexico's forests, and SEDUE with parks and forest ecology.) The U.S. Forest Service has supplied technical consultation "on call".

Conservation consciousness is high in Mexico, but the Government needs to broaden its approach to forestry to see that it has two aspects: reforestation and harvesting, which together will improve the quality and supply of forests. It can then consider ways to combine conservation and reforestation with forest industries to meet domestic needs for wood for construction and fuel.

Resources:

The USDA Forest Service will work with Mexico's public and private forestry centers to devise a program to help them meet their objectives:

1. The U.S. Forest Service will supply technical support to the State of Veracruz (and other forestry programs) under agreement to be negotiated. In addition, the Forest Service and U.S. Agricultural centers, working through LAC and S&T-funded technical support projects, will supply technical support for development of firewood shrubs and tree crops, a nursery and a genetic center.

2. The Forest Service and the National Parks Commission will work with SARH and SEDUE to identify possible technical gaps.

3. It will arrange a program for SARH, SEDUE and other public and private individuals who are responsible for or who oversee land use policy making to observe directly reforestation technology in action on U.S. commercial forest lands such as those owned by Weyerhaeuser.

4. These two efforts will be combined in a special program to be built into the curriculum of a qualified U.S. forestry faculty. This program will serve the needs for further academic training and field observation at U.S. commercial forest industries and experimental stations.

Resources:

USDA:

Graduate Program for ADCs
Forest Service
U.S. National Parks Commission

AID:

LAC/RTI

Environmental Improvement

Of all of Latin American countries, Mexico has the greatest pressure for a commitment to clearing up and preventing its air, soil and water pollution problems. Overall consciousness has been raised by many in Mexico's government agencies and private sector. As a result of their efforts, the De la Madrid Administration established the Secretaria de Desarrollo Urbano y Ecologia (SEDUE) which is charged with the responsibility for controlling pollution sources.

Mexican laws currently in effect to impose fines and sanctions on violators, etc. are sufficient and forceful on paper. However, largely because of traditionally lax enforcement of aspects of civil law, these particular laws are very rarely enforced. There are possible ways to encourage enforcement, however.

Although the negative effects of pollution on health are generally well documented, such data in Mexico are well guarded from the public. Moreover, no detailed environmental assessment has been undertaken in Mexico. A carefully documented, politically neutral assessment of air, water and solid waste pollution; natural resource usage; regulations and law enforcement; and public and private agencies may generate the political will for stiffer enforcement.

Also useful would be a practical training program for SEDUE and Mexican civil law enforcement officials concerned with anti-pollution regulation centered on observation of environmental enforcement in operation in the U.S.

Taking advantage of Mexico's superior environmental capability and commitment, we propose encouraging Mexico to sponsor a series of action-oriented seminars on air, soil and water pollution and disposal of toxic wastes, anti-pollution programs and law enforcement programs for other ADCs which face similar problems.

This will help them to design and carry out their own cost-effective action plans. Serving as the host of this series of seminars may help to generate in Mexico the needed incentive to proceed with certain programs which, at present, it is delaying (e.g., anti-pollution programs in border areas).

Because of its deep involvement with Mexican agencies and private conservation organizations over several years, the Conservation Foundation (a private, non-profit organization based in Washington, D.C.) will be asked to contribute technical consultation and advice to this effort and to help with preparation of printed material (e.g., summaries, agendas, etc.).

Resources:

AID: 1) LAC Regional Conferences and Seminars project.

2) Third Country Training Program

EPA/OSHA

The Conservation Foundation

Environment and Biological Diversity Research

There are few countries in the world with which the U.S. has more ongoing programs as well as formal and informal agreements related to the conservation and protection of biological diversity than Mexico. For example, the U.S. conducts more joint scientific marine research in Mexican waters and with Mexican groups than with any other nation. This research benefits both countries, but its results benefit other ADCs as well.

LAC and the S&T Bureaus provide technical support for environmental studies and information seminars. In addition, the Office of the Science Advisor provides grants on a competitive basis for research in the natural sciences (biology, chemistry and engineering) related to health and the environment. Mexican scientists are encouraged to continue their participation in these programs. Scientists from the ADCs with similar environmental conditions, interests and scientific qualifications are expressing interest in broadening collaborative research and information sharing to include themselves. To encourage this, Mexico might co-sponsor and co-finance seminars open to participation by other country's scientists in scientific fields in which Mexican scientists have made significant contributions.

Resources:

-LAC and S&T technical assistance information sharing and applied research activities.

-Program in Science and Technical Cooperation research grants.